In the Claims:

Please cancel claims 53, 55, and 57.

Please amend claims 1, 15, 17, 37, 52, 54, and 56 as indicated below.

The claims after amendment read as follows:

1. (Currently amended) A method of suppressing a masking agent selected from the group consisting of leukocyte esterases, myoglobin and hemoglobin analogues, myoglobin and hemoglobin derivatives, myoglobin and hemoglobin oxidation products, myoglobin and hemoglobin breakdown products, ferritins, methemoglobin, sulfhemoglobin, and bilirubin, comprising suppressing the interference of a masking agent on a molecular assay of a nucleic acid-containing test sample by contacting said test sample with an amount of a divalent metal chelator and an amount of at least one chelator enhancing component, the amounts of said divalent metal chelator(s) and said chelator enhancing component(s) being selected such that the effects of any masking agents selected from the group consisting of leukocyte esterases, myoglobin and hemoglobin analogues, myoglobin and hemoglobin derivatives, myoglobin and hemoglobin oxidation products, myoglobin and hemoglobin breakdown products, ferritins, methemoglobin, sulfhemoglobin, and bilirubin are suppressed in the molecular assay, wherein the concentration of chelator enhancing component(s) is from about 0.1 M to less than about [[1.75 M]] 1.25 M, and wherein the concentration of chelator(s) is from about 0.01 M to about 0.1 M.

2. (Previously presented) The method of claim 1, wherein said divalent metal chelator is selected from the group consisting of ethylenediaminetetraacetic acid, imidazole, ethylene*bis*(oxyethylenenitriol)tetraacetic acid; iminodiacetate; and 1,2-*bis*(2-

aminophenoxy)ethane-N,N,N',N'-tetraacetic acid; *bis*(5-amidino-2-benzimidazolyl)methane and salts thereof.

3. (Previously presented) The method of claim 1, wherein said divalent metal chelator is selected from the group consisting of ethylenediaminetetraacetic acid and 1,2-*bis*(2-aminophenoxy)ethane-N,N,N',N'-tetraacetic acid, and salts thereof.

4. (Canceled)

5. (Canceled)

6. (Original) The method of claim 1, wherein said chelator enhancing component is selected from the group consisting of lithium chloride, guanidine, sodium salicylate, sodium perchlorate and sodium thiocyanate.

7. (Original) The method of claim 6, wherein said chelator enhancing component is selected from the group consisting of sodium perchlorate, sodium thiocyanate, and lithium chloride.

8. (Canceled)

9. (Canceled)

10. (Original) The method of claim 1, wherein said masking agent is selected from the group consisting of leukocyte esterases and heme proteins.

11. (Original) The method of claim 10, wherein said heme protein is selected from the group consisting of myoglobin and hemoglobin analogs, and oxidation and breakdown products thereof.

12. (Original) The method of claim 1, wherein said masking agent is selected from the group consisting of ferritins, methemoglobin, sulfhemoglobin and bilirubin.

13. (Original) The method of claim 1, wherein said masking agent is selected from the group consisting of methemoglobin and bilirubin.

14. (Previously presented) The method of claim 1, wherein said nucleic acid-containing test sample is further contacted with an amount of at least one enzyme inactivating component selected from the group consisting of manganese chloride, sarkosyl, and sodium dodecyl sulfate in the range of up to about 5% molar concentration.

15. (Currently amended) The method of claim 1, wherein said nucleic acid is selected from the group ~~selected from the group~~ consisting of DNA, RNA, mRNA, and cDNA.

16. (Original) The method of claim 15 wherein said DNA is eukaryotic DNA.

17. (Currently amended) A method of improving the signal response of a molecular assay, comprising suppressing the interference of a masking agent selected from the group consisting of leukocyte esterases, myoglobin and hemoglobin analogues, myoglobin and hemoglobin derivatives, myoglobin and hemoglobin oxidation products, myoglobin and hemoglobin breakdown products, ferritins, methemoglobin, sulfhemoglobin, and bilirubin on a molecular assay of a nucleic acid-containing test sample by contacting said test sample with an amount of a divalent metal chelator and an amount of at least one chelator enhancing component, the amounts of said divalent metal chelator(s) and said chelator enhancing component(s) being selected such that said masking agents are suppressed; extracting molecular analytes of interest from said preserved test sample; and conducting a molecular assay on said extracted molecular analytes of interest, wherein the signal response of said molecular assay is improved by

suppressing the effects of any masking agents selected from the group consisting of leukocyte esterases, myoglobin and hemoglobin analogues, myoglobin and hemoglobin derivatives, myoglobin and hemoglobin oxidation products, myoglobin and hemoglobin breakdown products, ferritins, methemoglobin, sulfhemoglobin, and bilirubin, wherein the concentration of chelator enhancing component(s) is from about 0.1 M to less than about [[1.75 M]] 1.25 M, and wherein the concentration of chelator(s) is from about 0.01 M to about 0.1 M.

18. (Previously presented) The method of claim 17, wherein said divalent metal chelator is selected from the group consisting of ethylenediaminetetraacetic acid, imidazole, ethylene*bis*(oxyethylenenitriol)tetraacetic acid; iminodiacetate; and 1,2-*bis*(2-aminophenoxy)ethane-N,N,N',N'-tetraacetic acid; *bis*(5-amidino-2-benzimidazolyl)methane and salts thereof.

19. (Previously presented) The method of claim 17, wherein said divalent metal chelator is selected from the group consisting of ethylenediaminetetraacetic acid and 1,2-*bis*(2-aminophenoxy)ethane-N,N,N',N'-tetraacetic acid, and salts thereof.

20. (Canceled)

21. (Canceled)

22. (Original) The method of claim 17, wherein said chelator enhancing component is selected from the group consisting of lithium chloride, guanidine, sodium salicylate, sodium perchlorate and sodium thiocyanate.

23. (Original) The method of claim 22, wherein said chelator enhancing component is selected from the group consisting of sodium perchlorate, sodium thiocyanate, and lithium chloride.

24. (Canceled)

25. (Canceled)

26. (Original) The method of claim 17, wherein said masking agent is selected from the group consisting of leukocyte esterases and heme proteins.

27. (Original) The method of claim 26, wherein said heme protein is selected from the group consisting of myoglobin and hemoglobin analogs, and oxidation and breakdown products thereof.

28. (Original) The method of claim 17, wherein said masking agent is selected from the group consisting of ferritins, methemoglobin, sulfhemoglobin and bilirubin.

29. (Original) The method of claim 17, wherein said masking agent is selected from the group consisting of methemoglobin and bilirubin.

30. (Previously presented) The method of claim 17 wherein said nucleic acid-containing test sample is further contacted with an amount of at least one enzyme inactivating component selected from the group consisting of manganese chloride, sarkosyl, and sodium dodecyl sulfate in the range of up to about 5% molar concentration.

31. (Original) The method of claim 17 wherein said nucleic acid-containing test sample is a bodily fluid.

32. (Previously presented) The method of claim 31 wherein said bodily fluid is selected from the group consisting of urine, blood, blood serum, amniotic fluid; cerebrospinal and spinal fluid; synovial fluid; conjunctival fluid; salivary fluid; vaginal fluid; stool; seminal fluid; lymph; bile; tears, and sweat.

33. (Original) The method of claim 32 wherein said bodily fluid is urine.

34. (Original) The method of claim 32 wherein said nucleic acid is selected from the group consisting of DNA, RNA, mRNA, and cDNA.

35. (Original) The method of claim 34 wherein said DNA is eukaryotic DNA.

36. (Original) The method of claim 17 wherein said molecular assay is the polymerase chain reaction.

37. (Currently amended) A method of improving hybridization of nucleic acids by suppressing a masking agent selected from the group consisting of leukocyte esterases, myoglobin and hemoglobin analogues, myoglobin and hemoglobin derivatives, myoglobin and hemoglobin oxidation products, myoglobin and hemoglobin breakdown products, ferritins, methemoglobin, sulfhemoglobin, and bilirubin, comprising contacting a test nucleic acid with a reagent comprising an amount of at least one divalent metal chelator; and an amount of at least one chelator enhancing component, the amounts of said divalent metal chelator(s) and said chelator enhancing component(s) being selected such that hybridization is improved, such a test solution is formed, and contacting the test solution with a target nucleic acid under conditions favorable for hybridization, such that hybridization occurs and the effect of any masking agent selected from the group consisting of leukocyte esterases, myoglobin and hemoglobin analogues, myoglobin and hemoglobin derivatives, myoglobin and hemoglobin oxidation products, myoglobin and hemoglobin breakdown products, ferritins, methemoglobin, sulfhemoglobin, and bilirubin is suppressed, wherein the concentration of chelator enhancing component(s) is from about 0.1 M to <u>less than</u> about [[1.75 M]] <u>1.25 M</u>, and wherein the concentration of chelator(s) is from about 0.01 M to about 0.1 M.

38. (Previously presented) The method of claim 37, wherein said divalent metal chelator is selected from the group consisting of ethylenediaminetetraacetic acid, imidazole, ethylene*bis*(oxyethylenenitriol)tetraacetic acid; iminodiacetate; and 1,2-*bis*(2-

aminophenoxy)ethane-N,N,N',N'-tetraacetic acid; *bis*(5-amidino-2-benzimidazolyl)methane and salts thereof.

39. (Previously presented) The method of claim 37, wherein said divalent metal chelator is selected from the group consisting of ethylenediaminetetraacetic acid and 1,2-*bis*(2-aminophenoxy)ethane-N,N,N',N'-tetraacetic acid, and salts thereof.

40. (Canceled)

41. (Canceled)

42. (Original) The method of claim 37, wherein said chelator enhancing component is selected from the group consisting of sodium perchlorate, sodium thiocyanate, and lithium chloride.

43. (Canceled)

44. (Canceled)

45. (Previously presented) The method of claim 37 wherein said nucleic acid-containing test sample is further contacted with an amount of at least one enzyme inactivating component selected from the group consisting of manganese chloride, sarkosyl, and sodium dodecyl sulfate in the range of up to about 5% molar concentration.

46. (Previously presented) The method of claim 37 wherein said test nucleic acid is selected from the group consisting of DNA, RNA, mRNA, and cDNA.

47. (Original) The method of claim 46 wherein said DNA is eukaryotic DNA.

48. (Previously presented) The method of claim 1, wherein said molecular assay is an amplification reaction and said amplification is the polymerase chain reaction.

49. (Currently amended) A kit for conducting a polymerase amplification reaction comprising a reagent for suppressing the interference of a masking agent on a molecular assay of a nucleic acid-containing test sample such that when a masking agent is present in a nucleic acid-containing sample subjected to a polymerase amplification reaction said masking agents are suppressed; and instructions for use, wherein the masking agent is selected from the group consisting of leukocyte esterases, myoglobin and hemoglobin analogues, myoglobin and hemoglobin derivatives, myoglobin and hemoglobin oxidation products, myoglobin and hemoglobin breakdown products, ferritins, methemoglobin, sulfhemoglobin, and bilirubin and where the effect of any masking agent selected from the group consisting of leukocyte esterases, myoglobin and hemoglobin analogues, myoglobin and hemoglobin derivatives, myoglobin and hemoglobin oxidation products, myoglobin and hemoglobin breakdown products, ferritins, methemoglobin, sulfhemoglobin, and bilirubin is suppressed, and such that the resulting concentration of chelator enhancing component(s) is from about 0.1 M to less than about 1.25 M, and wherein the concentration of chelator(s) is from about 0.01 M to about 0.1 M.

50. (Previously presented) The method of claim 1 wherein the molecular assay is selected from the group consisting of PCR, RT-PCR, ligase chain reaction, NASBA, SDA, and genetic transformation testing.

51. (Previously presented) The method of claim 17 wherein the molecular assay is selected from the group consisting of PCR, RT-PCR, ligase chain reaction, NASBA, SDA, and genetic transformation testing.

52. (Currently amended)) The method of claim 1 wherein the concentration of chelator enhancing component(s) is from about 0.5 M to less than about [[1.75 M]] 1.25 M.

53. (Cancelled)

54. (Currently amended) The method of claim 17 wherein the concentration of chelator enhancing component(s) is from about 0.5 M to less than about [[1.75 M]] 1.25 M.

55. (Cancelled)

56. (Currently amended) The method of claim 37 wherein the concentration of chelator enhancing component(s) is from about 0.5 M to less than about [[1.75 M]] 1.25 M.

57. (Cancelled)

58. (New) The method of claim 1 wherein the process of suppressing the masking agent occurs in the absence of a substantial concentration of a stabilizer.

59. (New) The method of claim 1 wherein the process of suppressing the masking agent occurs in the absence of a substantial concentration of a detergent.

60. (New) The method of claim 17 wherein the method of improving the signal response of the molecular assay occurs in the absence of a substantial concentration of a stabilizer.

61. (New) The method of claim 17 wherein the method of improving the signal response of the molecular assay occurs in the absence of a substantial concentration of a detergent.

62. (New) The method of claim 37 wherein the method of improving hybridization of nucleic acids occurs in the absence of a substantial concentration of a stabilizer.

63. (New) The method of claim 37 wherein the method of improving hybridization of nucleic acids occurs in the absence of a substantial concentration of a detergent.